

Heat Exchanger Material  
of Construction:

Shell - C. S.  
Wetted Parts  
316 S.S.

- 4.9 Neutralization System (Eq. Nos. 032-008, 032-008A, 032-009, 032-009A, 032-010, 032-010A, 032-010A.1, 032-010B, and 032-010B.1)

4.9.1 Function

The function of the neutralization system is to collect, neutralize, and discharge the regeneration waste water from the cation, anion, and mixed bed exchangers and the continuous blowdown from the HRSG IP drum.

4.9.2 Detailed Description

The neutralization system consist of two neutralization tanks with mixing ejectors, two mixing/discharge pumps, instruments, interlocks, and controls. For the detailed description see Glegg Water Conditioning Owner's Manual for Boiler Make-up Water Treatment System and Glegg Water Conditioning Vendor Data (Volumes 1, 2, and 3) for Boiler Make-up Water Treatment System.

4.9.3 Design Specification

Neutralization Tank	
Quantity:	2
Neutralization Tank	
Manufacturer:	Palmer Mfg. & Tank Inc.
Neutralization Tank	
Capacity/Each:	27,000 Gal.
Neutralization Tank	
Size/Each:	14'-0" Dia. X 24'-0" High
Mixing Ejector	
Quantity/Tank:	12
Mixing Ejector Mfgr.:	Bex Engineering Ltd.
Mixing Ejector Model No.:	2 MP
System Skid Dimensions:	6'-0" X 6'-0"
Mixing/Discharge	

Pump Quantity: 2  
Mixing/Discharge  
Pump Manufacturer: Durco  
Mixing/Discharge  
Pump Model No.: MKIII 3X1-1/2-6157  
Pump Capacity: 250 gpm at 100 ft.  
Pump Service: Dilute H<sub>2</sub>SO<sub>4</sub>/NaOH  
Pump Motor: 15 HP at 3600 rpm

#### 4.10 Control System (Eq. Nos. 032-011, 032-011A, 032-011B and 032-011C)

##### 4.10.1 Function

The function of the Boiler Make-up Water Treatment Control System is to operate, control, and provide alarm/status for the bag filter, carbon filters, cation exchangers, anion exchangers, mixed bed exchangers, acid regeneration system, caustic regeneration system, and neutralization system.

##### 4.10.2 Detailed Description

The automatic operation control functions are performed by a Programmable Logic Controller (PLC). Operator interface of the equipment is via a Man Machine Interface (MMI). The PLC and MMI are located in the water treatment area. A printer, located in the control room, provides an automatic log of the system status. For the detailed description see Glegg Water Conditioning Owner's Manual for Boiler Make-up Water Treatment System and Glegg Water Conditioning Vendor Data (Volumes 1, 2, and 3) for Boiler Make-up Water Treatment System.

##### 4.10.3 Design Specification

PLC Manufacturer: Allen Bradley  
PLC Model No.: 1785-LT PLC 5/15  
8K Memory  
MMI Manufacturer: Total Control  
Products  
MMI Model No.: MMS-22341C1A  
Turbo Processor w/  
640K Memory